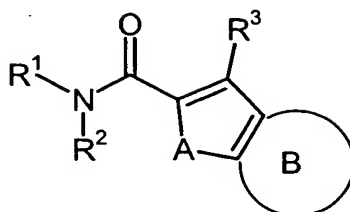


**Patent claims**

1. A compound of the formula



in which

$R^1$  represents 1-azabicyclo[2.2.2]oct-3-yl,

$R^2$  represents hydrogen or  $C_1$ - $C_6$ -alkyl,

$R^3$  represents hydrogen, halogen or  $C_1$ - $C_6$ -alkyl,

A represents oxygen or sulfur,

and

the ring B represents benzo, pyrido, pyrimido, pyridazo or pyridazino which are optionally substituted by radicals selected from the group consisting of hydrogen, halogen,  $C_1$ - $C_6$ -alkanoyl, carbamoyl, cyano, trifluoromethyl, trifluoromethoxy, nitro, amino,  $C_1$ - $C_6$ -acylamino,  $C_1$ - $C_6$ -alkyl,  $C_1$ - $C_6$ -alkoxy,  $C_1$ - $C_6$ -alkylthio,  $C_1$ - $C_6$ -alkylamino, heteroarylcarbonylamino, arylcarbonylamino,  $C_1$ - $C_4$ -alkylsulfonylamino, di- $(C_1$ - $C_4$ -alkylsulfonyl)amino, arylsulfonylamino, di(arylsulfonyl)amino,  $C_3$ - $C_6$ -cycloalkylcarbonylmethyl, 1,3-dioxapropane-1,3-diyl, amino(hydroxyimino)methyl and benzo,

or a salt, a solvate or a solvate of a salt thereof.

2. A compound of the formula (I) as claimed in claim 1,

5 in which

$R^1$  represents 1-azabicyclo[2.2.2]oct-3-yl,

10  $R^2$  represents hydrogen or (C<sub>1</sub>-C<sub>6</sub>)-alkyl,

$R^3$  represents hydrogen, halogen or (C<sub>1</sub>-C<sub>6</sub>)-alkyl,

A represents oxygen or sulfur,

15 and

the ring B represents benzo, pyrido, pyrimido, pyridazo or pyridazino  
which are optionally substituted by radicals selected from the  
group consisting of hydrogen, halogen, formyl, carbamoyl,  
20 cyano, trifluoromethyl, trifluoromethoxy, nitro, amino,  
formamido, acetamido, (C<sub>1</sub>-C<sub>6</sub>)-alkyl, (C<sub>1</sub>-C<sub>6</sub>)-alkoxy, (C<sub>1</sub>-C<sub>6</sub>)-  
alkylthio and benzo,

or a salt, a solvate or a solvate of a salt thereof.

25

3. A compound of the formula (I) as claimed in claim 1,

in which

30  $R^1$  represents 1-azabicyclo[2.2.2]oct-3-yl,

R<sup>2</sup> represents hydrogen,

R<sup>3</sup> represents hydrogen, chlorine, fluorine or methyl,

5 A represents oxygen or sulfur,

and

10 the ring B represents benzo or pyrido, where benzo or pyrido is optionally substituted by 1 to 3 radicals selected from the group consisting of hydrogen, halogen, formyl, carbamoyl, cyano, trifluoromethyl, trifluoromethoxy, nitro, amino, formamido, acetamido, C<sub>1</sub>-C<sub>4</sub>-alkyl, C<sub>1</sub>-C<sub>4</sub>-alkoxy, C<sub>1</sub>-C<sub>4</sub>-alkylthio, C<sub>1</sub>-C<sub>4</sub>-alkylamino, furylcarbonylamino, phenylcarbonylamino, 15 methylsulfonylamino, di(phenylsulfonyl)amino, cyclopropylcarbonylmethyl, 1,3-dioxapropene-1,3-diyl, amino(hydroxyimino)methyl and benzo,

or a salt, a solvate or a solvate of a salt thereof.

20

4. A compound as claimed in claim 1 of the formula (I), where

R<sup>1</sup> represents (3*R*)-1-azabicyclo[2.2.2]oct-3-yl,

25

and R<sup>2</sup>, R<sup>3</sup>, A and the ring B are as defined in claim 1.

5. A compound as claimed in claim 1, of the formula (I), where

R<sup>1</sup> represents (3*R*)-1-azabicyclo[2.2.2]oct-3-yl,

30

R<sup>2</sup> and R<sup>3</sup> represent hydrogen,

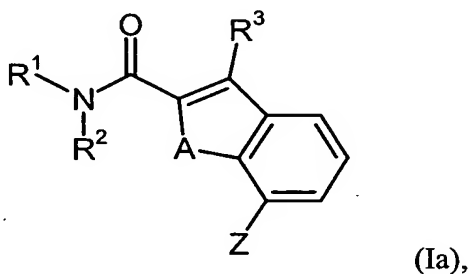
A represents sulfur,

and

the ring B represents benzo or pyrido, where benzo and pyrido are optionally substituted by 1 to 3 radicals selected from the group consisting of hydrogen, halogen, cyano, trifluoromethyl, trifluoromethoxy, nitro, amino, formamido, acetamido and C<sub>1</sub>-C<sub>4</sub>-alkyl,

or a salt, a solvate or a solvate of a salt thereof.

6. A compound as claimed in claim 1 of the formula



in which

R<sup>1</sup> represents 1-azabicyclo[2.2.2]oct-3-yl,

R<sup>2</sup> represents hydrogen or C<sub>1</sub>-C<sub>6</sub>-alkyl,

R<sup>3</sup> represents hydrogen, halogen or C<sub>1</sub>-C<sub>6</sub>-alkyl,

A represents oxygen or sulfur,

and

5           Z       represents hydrogen, halogen, formyl, carbamoyl, cyano, trifluoro-  
methyl, trifluoromethoxy, nitro, amino, formamido, acetamido, C<sub>1</sub>-C<sub>6</sub>-  
alkyl, C<sub>1</sub>-C<sub>6</sub>-alkoxy, C<sub>1</sub>-C<sub>6</sub>-alkylthio, C<sub>1</sub>-C<sub>6</sub>-alkylamino, heteroaryl-  
carbonylamino, arylcarbonylamino, C<sub>1</sub>-C<sub>4</sub>-alkylsulfonylamino,  
di(arylsulfonyl)amino, C<sub>3</sub>-C<sub>6</sub>-cycloalkylcarbonylmethyl or amino-  
(hydroxyimino)methyl,

10           or a salt, a solvate or a solvate of a salt thereof.

7.       A compound as claimed in claim 1 of the formula (Ia),

in which

15           R<sup>1</sup>       represents 1-azabicyclo[2.2.2]oct-3-yl,

          R<sup>2</sup>       represents hydrogen,

          R<sup>3</sup>       represents hydrogen, chlorine, fluorine or methyl,

20           A       represents oxygen or sulfur,

and

25           Z       represents hydrogen, halogen, formyl, carbamoyl, cyano, trifluoro-  
methyl, trifluoromethoxy, nitro, amino, formamido, acetamido,  
methyl, ethyl, methoxy, ethoxy, C<sub>1</sub>-C<sub>4</sub>-alkylamino,  
furylcarbonylamino, phenylcarbonylamino, methylsulfonylamino,  
di(phenylsulfonyl)amino, cyclopropylcarbonylmethyl or  
30           amino(hydroxyimino)methyl,

or a salt, a solvate or a solvate of a salt thereof.

8. A compound as claimed in claim 1 of the formula (Ia),

5 in which

$R^1$  represents (3*R*)-1-azabicyclo[2.2.2]oct-3-yl,

10  $R^2$  represents hydrogen,

$R^3$  represents hydrogen, chlorine, fluorine or methyl,

A represents oxygen or sulfur,

15 and

20 Z represents hydrogen, halogen, formyl, carbamoyl, cyano, trifluoro-  
methyl, trifluoromethoxy, nitro, amino, formamido, acetamido,  
methyl, ethyl, methoxy, ethoxy,  $C_1$ - $C_4$ -alkylamino,  
furylcarbonylamino, phenylcarbonylamino, methylsulfonylamino,  
di(phenylsulfonyl)amino, cyclopropylcarbonylmethyl or  
amino(hydroxyimino)methyl,

or a salt, a solvate or a solvate of a salt thereof.

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9. A process for preparing compounds of the formula (I) as claimed in claim 1,  
characterized in that

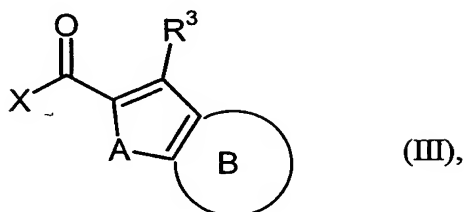
compounds of the formula

30



in which  $R^1$  and  $R^2$  are as defined in claim 1

are reacted with a compound of the formula



in which

$R^3$ , A and the ring B are as defined in claim 1 and

10 X represents hydroxy or a suitable leaving group,

in an inert solvent, if appropriate in the presence of a condensing agent and if appropriate in the presence of a base.

- 15
10. A compound as claimed in any of claims 1 to 8 for the treatment and/or prophylaxis of diseases.
11. A medicament comprising at least one of the compounds as claimed in any of claims 1 to 8 in a mixture with at least one pharmaceutically acceptable, essentially nontoxic carrier or excipient.
- 20
12. The use of compounds as claimed in any of claims 1 to 8 for preparing a medicament for improving perception, concentration, learning and/or memory.
- 25

13. The use of compounds as claimed in any of claims 1 to 8 for preparing a medicament for the treatment and/or prophylaxis of impairments of perception, concentration, learning and/or memory.
- 5 14. A medicament as claimed in claim 11 for the treatment and/or prophylaxis of impairments of perception, concentration, learning and/or memory.
- 10 15. A method for controlling in impairments of perception, concentration, learning and/or memory humans or animals by administering an effective amount of a compound as claimed in claims 1 to 8.